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THREE NEW STOMATOPOD CRUSTACEANS OF THE  
FAMILY LYSIOSQUILLIDAE FROM THE EASTERN  
PACIFIC REGION

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The three new species described below include a new *Coronida* from Cocos Island and two new species of *Nannosquilla*; a key to the Eastern Pacific species of *Nannosquilla* is presented. The *Coronida* is of particular interest in that it represents an Indo-West Pacific element in the eastern Pacific stomatopod fauna.

All of the specimens reported below have been deposited in the Division of Crustacea, National Museum of Natural History, Smithsonian Institution (USNM).

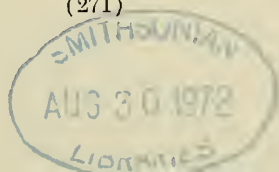
Terms and measurements have been described in detail in an earlier paper (Manning, 1969). The illustrations are by my wife Lilly.

***Coronida cocosiana* new species**

Figure 1

*Holotype*: ♂, TL 20 mm; Cocos Island, Costa Rica; divers at anchorage; 26 April 1941; USNM 139518.

*Diagnosis*: Antennular peduncle more than two-thirds carapace length. Cornea (Figs. 1a, b) bilobed, set almost transversely on stalk. Ocular scales subquadrate, separate. Rostral plate (Fig. 1a) broader than long, rounded anteriorly. Antennal protopod with 1 ventral papilla. Dactylus of raptorial claw (Fig. 1c) with 4 teeth, outer margin of dactylus inflated basally. Mandibular palp and 5 epipods present. Anterior 4 abdominal somites unarmed, smooth. Posterior half of fifth abdominal somite covered with rounded tubercles; 3 sharp carinae, dorsal-most shortest, present laterally on fifth somite. Sixth abdominal somite (Fig. 1e) completely covered with raised, rounded tubercles, posterior margin with row of blunt spines; lateral margin of sixth somite forming entire carina terminating posteriorly in small spine. Telson (Fig. 1e)



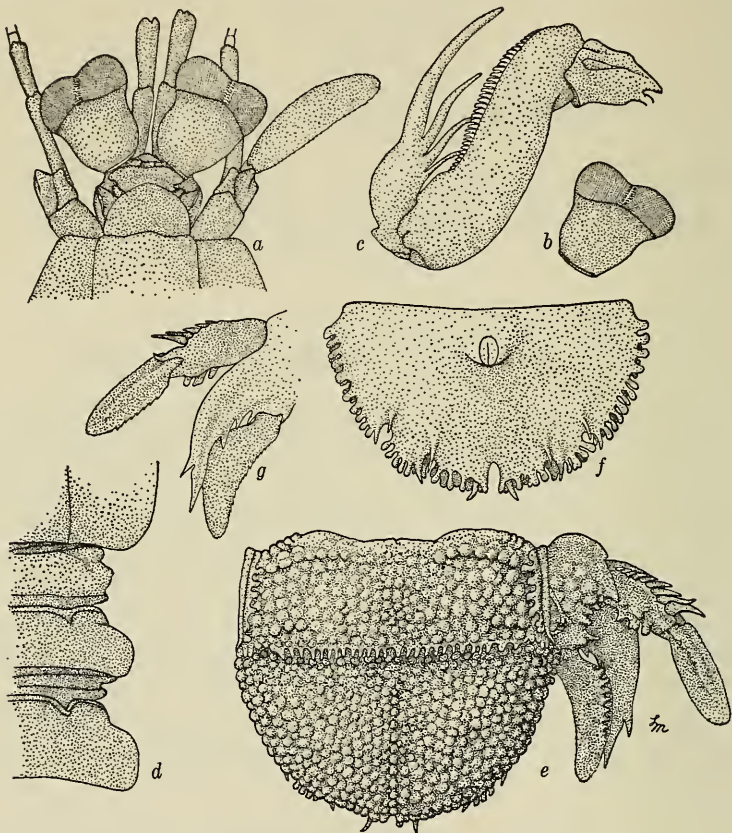


FIG. 1. *Coronida cocosiana* new species, male holotype, TL 20 mm: a, anterior portion of body; b, eye; c, carpus, propodus, and dactylus of raptorial claw; d, lateral processes of fifth, sixth, and seventh thoracic somites; e, sixth abdominal somite, telson, and uropod, dorsal view; f, telson, ventral view; g, uropod, ventral view. (Setae omitted.)

broader than long, broadly rounded posteriorly, surface covered with raised, rounded tubercles; posterior margin of telson with rounded projections and with 3 pairs of teeth, inner movable, lateral 2 pairs fixed, each flanked mesially by slender denticle; ventral surface of telson (Fig 1f) unarmed. Dorsal surface of uropod (Fig. 1e) irregularly tuberculate; proximal segment of exopod tuberculate dorsally, with 9 or 10 movable spines on outer margin and 4 stiff setae on inner distal margin, ventral surface with long, sinuous, sharp projection at articulation with distal segment; endopod with row of erect tubercles dorsally; basal prolongation

(Fig. 1g) with inner distal spine longer than outer, and with 3 smaller spines on inner margin.

*Measurements:* Male holotype, total length 20 mm. Other measurements, in mm: carapace length 3.7; cornea width 1.2; rostral plate length 0.7, width 1.0; fifth abdominal somite width 4.0; telson length 2.7, width 4.1.

*Remarks:* *Coronida cocosiana* resembles the Indo-West Pacific *C. trachura* (Von Martens, 1881) in basic facies, but differs from that species in several features. The rostral plate is rounded rather than angled anteriorly, the dorsal tubercles on the posterior two abdominal somites and telson are rounded rather than stellate, and the ventral surface of the telson is unarmed. The new species differs from *C. armata* (Leach, 1817) (see Holthuis, 1967, for synonymy), reported from the Galapagos Islands by Schmitt (1940) as *C. bradyi*, in having rounded rather than spinous projections on the posterior portion of the body, and the ventral surface of the telson is not ornamented with denticles as in *C. armata*.

*Coronida cocosiana* probably represents another Indo-West Pacific element in the Eastern Pacific stomatopod fauna—it clearly is more related to *C. trachura* than to the Eastern Atlantic-Eastern Pacific *C. armata*. This is the third stomatopod reported from the Eastern Pacific with Indo-West Pacific rather than Atlantic affinities; the other two species are *Pseudosquilla adialtata* Manning, 1964 and *Lysiosquilla panamica* Manning, 1971.

*Etymology:* The specific name is derived from the type-locality.

#### *Nannosquilla galapagensis* new species

##### Figure 2

*Holotype:* ♀, TL 22 mm; Black Beach Anchorage, Charles Island, Galapagos Islands; 15 fathoms; Fred E. Lewis, collector; 7 March 1938; USNM 139519.

*Paratypes:* 2 ♀, TL 21–23 mm; data as for holotype; USNM 139520.

*Diagnosis:* Cornea (Fig. 2a) subglobular, set slightly obliquely on stalk. Rostral plate (Fig. 2a) subquadrate, lateral margins convex, slightly divergent, anterior margins converging on obtusely pointed apex. Dactylus of raptorial claw with 13–15 teeth. Mandibular palp absent; 4 epipods present. Abdomen flattened, smooth, unarmed except for sharp posterolateral projections on sixth somite (Fig. 2b). Telson (Figs. 2b, c) broader than long, smooth dorsally, false eave with low, inconspicuous median and submedian projections, lateral teeth not visible in dorsal view; marginal armature of telson comprising, on each side of midline: 8 or 9 submedian denticles, 1 movable submedian tooth, and 4 and 5 fixed lateral denticles and teeth. Uropod (Figs. 2b, d) with 2 stiff setae on inner margin of proximal segment of exopod and 4 or 5 spines on outer margin; inner spine of basal prolongation of uropod much longer than outer.

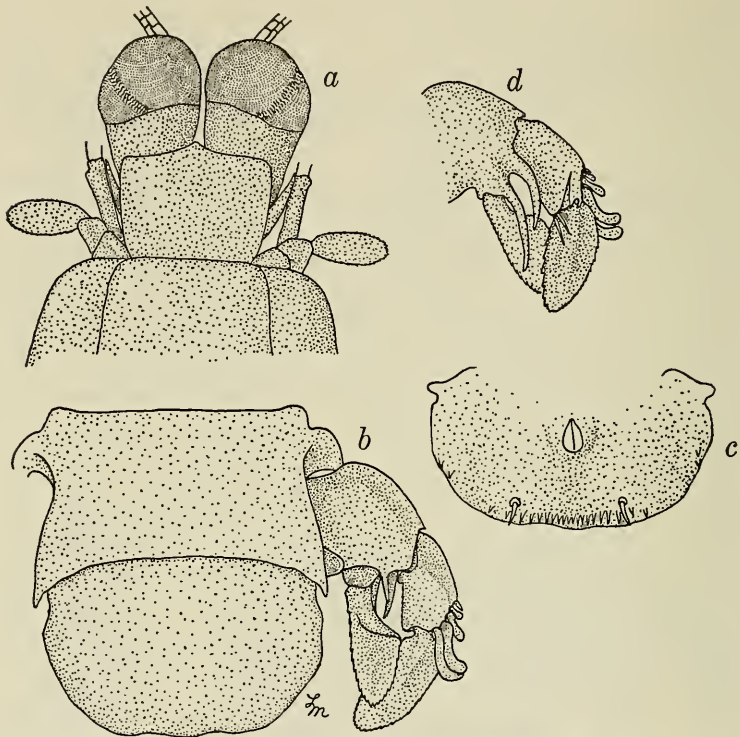


FIG. 2. *Nannosquilla galapagensis* new species, female holotype, TL 22 mm; *a*, anterior portion of body; *b*, sixth abdominal somite, telson, and uropod, dorsal view; *c*, telson, ventral view; *d*, uropod, ventral view. (Setae omitted.)

*Measurements:* Females only known, TL 21–23 mm. Other measurements, in mm, of female holotype: carapace length 3.1; cornea width 1.1; rostral plate length 1.1, width 1.4; fifth abdominal somite width 3.0; telson length 1.7, width 2.5.

*Remarks:* *Nannosquilla galapagensis* is very similar to *N. decemspinosa* (Rathbun, 1910), which is known from a few localities in the eastern Pacific between Costa Rica and Peru, but differs in having more teeth on the dactylus of the claw, 13–15 rather than 11, in having 4–5 rather than 3 fixed lateral denticles and teeth on the telson, and in having a minute lateral tooth on the telson which is not visible in dorsal view. The fixed lateral teeth and denticles in *N. galapagensis* are much smaller than those found in *N. decemspinosa*.

The Eastern Pacific species of *Nannosquilla* may be distinguished by using the key given below.



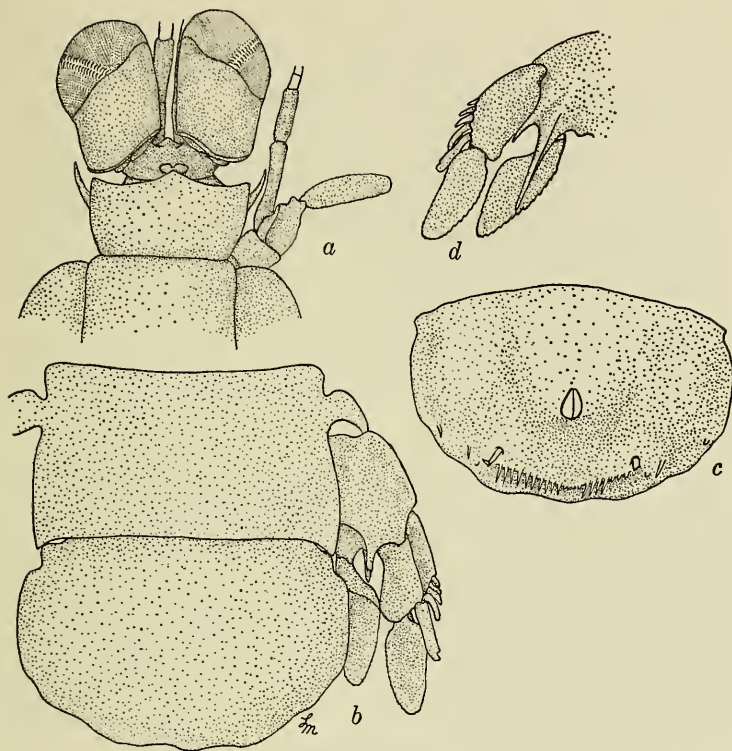


FIG. 3. *Nannosquilla similis* new species, female holotype, TL ca. 25 mm: *a*, anterior portion of body; *b*, sixth abdominal somite, telson, and uropod, dorsal view; *c*, telson, ventral view; *d*, uropod, ventral view. (Setae omitted.)

*Etymology*: The specific name is derived from the type-locality, the Galapagos Islands.

***Nannosquilla similis* new species**

Figure 3

*Holotype*: Broken ♀, TL about 25 mm; north end of Albemarle Island, Galapagos Islands (near Allan Hancock Foundation station 145-34, 6-7 fathoms); from stomach of sand bass, Manter no. G88; 12 January 1934; USNM 139521.

*Diagnosis*: Cornea (Fig. 3*a*) subglobular, set obliquely on stalk. Rostral plate (Fig. 3*a*) rectangular, width twice greatest length, rounded

laterally, anterior margins bilaterally concave forming obtusely pointed median apex. Dactylus of raptorial claw with 17 teeth. Mandibular palp absent; 4 epipods present. Abdomen flattened, smooth, unarmed, posterolateral angles of sixth somite bluntly pointed (Fig. 3*b*). Telson (Figs. 3*b*, *c*) broader than long, smooth dorsally, false eave with low median projection, margins irregular, marginal teeth not visible in dorsal view; marginal armature of telson comprising, on each side of midline; 10 or 11 submedian denticles, 1 movable submedian tooth, and 3 small fixed lateral denticles, lateral teeth represented by obtuse lobes. Uropod (Figs. 3*b*, *d*) with 5 movable, spatulate spines on outer margin of proximal segment of exopod, stiff setae on inner margin not discernible; inner spine of basal prolongation of uropod much longer than outer.

*Measurements:* Female holotype, only known specimen, TL about 25 mm. Other measurements, in mm: carapace length 3.7; cornea width 1.4; rostral plate length 0.9, width 1.8; fifth abdominal somite width 4.1; telson length 2.3, width 3.6.

*Remarks:* *Nannosquilla similis* resembles *N. chilensis* (Dahl, 1954) and differs from the other species of the genus from the Eastern Pacific region in having a broad, rectangular rostral plate and in having 17 teeth on the dactylus of the raptorial claw. It differs from *N. chilensis* in having the inner spine of the basal prolongation of the uropod longer than the outer and in lacking posterolateral spines or sharp projections on the sixth abdominal somite. These species may be distinguished in the key to Eastern Pacific species given below.

*Etymology:* The specific name is from the Latin and alludes to the similarity of this species to *N. chilensis*.

#### DISCUSSION

The two new species of *Nannosquilla* described here bring to six the number of species known from the Eastern Pacific region. All but one are tropical; *N. chilensis* is a south temperate species which has not been collected north of 40° South Latitude. The Eastern Pacific species may be distinguished by the following key.

1. Rostral plate subrectangular in shape, width about twice greatest length ..... 2
- Rostral plate subquadrate in shape, width and length subequal or width slightly greater ..... 3
2. Sixth abdominal somite with spinous posterolateral projections. Spines of basal prolongation of uropod subequal in length (Dactylus of raptorial claw with 12-17 teeth) .....  
     ..... *N. chilensis* (Dahl, 1954); Chile.
- Sixth abdominal somite with bluntly pointed posterolateral projections. Inner spine of basal prolongation of uropod longer than outer (Dactylus of raptorial claw with 17 teeth) .....  
     ..... *N. similis* new species.

3. Spines of basal prolongation of uropod subequal in length. False eave of telson with median and 6 pairs of lateral projections. (Dactylus of raptorial claw with 8 teeth) .....  
 ..... *N. californiensis* (Manning, 1961); Gulf of California.  
 Inner spine of basal prolongation longer than outer. False eave of telson with less than 6 pairs of lateral projections ..... 4
4. False eave of telson with median and 4 pairs of lateral projections. Posterolateral angles of sixth abdominal somite produced into long, slender spines (Dactylus of raptorial claw with 10-14 teeth) ..... *N. anomala* Manning, 1967; California.  
 False eave of telson not markedly subdivided laterally (but small lateral tooth may be visible dorsally). Posterolateral angles of sixth abdominal somite not produced into long, slender spine ... 5
5. Marginal armature of telson including 3 pairs of fixed teeth, or denticles, lateralmost visible in dorsal view. Dactylus of raptorial claw with 11 teeth .....  
 ..... *N. decemspinosa* (Rathbun, 1910); Costa Rica and Peru.  
 Marginal armature of telson including 4-5 pairs of fixed teeth or denticles, none visible in dorsal view. Dactylus of raptorial claw with 13-15 teeth ..... *N. galapagensis* new species.

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